DAILY FIELD ACTIVITY REPORT

PROJECT NAME: Pre-Remedial Design Investigation and Baseline Sampling, Portland Harbor Superfund Site

DATE: May 3, 2018	**WEATHER:** Sunny, temperatures in the ~70s.

Personnel and Visitors Onsite:
Research vessel Tieton - CDM Smith: Wardah Azhar; AECOM: Anthony Palmieri; Geosyntec: Erin Dunbar; Gravity Marine: Rene Trudeau, Chad Furulie.

Research vessel Cayuse – CDM Smith: Julee Trump; AECOM: Mark Tauscher; Geosyntec: Adam Mcguire; Gravity Marine: Peter Jenkins, Jeff Schut

Planned Activity:

- Collect surface sediment samples at SMA targeted sample locations in Swan Island Lagoon, near River Miles (RM) 4.6 and 6.7, and continuing up river.

Activity Completed:
A tailgate safety meeting was led by AECOM. Topics included group review of each line item on the Tailgate form (typically reviewed less formally), Heat stress/hydration, emergency supply/equipment location review, boat sampling equipment safety.

Wardah Azhar performed oversight of surface sediment sampling at SMA targeted sediment locations from 08:00 to 17:40 on board the Tieton. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:

- 3-point composite surface sediment samples were collected at seven SMA locations within Swan Island Lagoon.
- Other activities included decontamination of sampling equipment using Alconox and deionized/distilled water and housekeeping of the sampling area.
- Position checks at PH-2 indicated that the vessel GPS was reading within 1.03 meters of the PH-2 survey coordinates, meeting the 1-2 m accuracy specification in the FSP.

Julee trump performed oversight of surface sediment sampling at random stratified locations from 08:00 to 17:30 on board the Cayuse. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:

- Position checks at PH-2 indicated that the vessel GPS was reading within 1.7 meters of the PH-2 survey coordinates, meeting the 1-2 m accuracy specification in the FSP.
- 3-point composite surface sediment samples were collected from 5 sediment management area (SMA) locations near RM 4.6 and 6.7 as summarized below. Activities included decontamination of sampling equipment using Alconox and deionized/distilled water and housekeeping of the sampling area.
- Duplicate sample and thin sample (recovery < 20 cm) collected as summarized below

Status of Schedule & Priority Work:

- The SMA targeted sampling will continue through the week. AECOM/Geosyntec are focusing on locations where good recovery is easily achieved, but still attempting to sampling areas of hard sediment per the EPA's method (communicated to them on 4/20/2018 with two samples) if hard sediment is encountered.
- Sample locations in areas of known/encountered heavy sheen contamination are planned to be skipped and returned to with support from NRC Environmental Services to contain sheen during sampling.
- Sampling is taking more time than initially projected.

Issues/Concerns/Resolutions (include work performed that was not planned or anticipated):
The Tieton had an engine issue so it was operated close the launch point within Swan Island Lagoon so as to not put too much stress on the engine until it can be repaired.

Swan Island Lagoon SMA location PDI-SG-S203 could not be sampled because it was located inside a boom for the anchored ship Matanuska. Additionally, SMA location PDI-SG-S199 was abandoned after six attempts with no recovery due to excessive debris getting caught in the sampler jaws, not allowing it to close.

Hard sands encountered at SMA location GS-S123: 2 grabs with < 20 cm in 25 FT radius, 2 grabs with open jaws and washout, 3 grabs > 20 cm recovery in 50 ft radius. EPA method was implemented, and two samples were collected as summarized below.

Flowing black sands were encountered at SMA location GS-S132 (approximately RM 6.7): No sample was collected due to excess loss of sands even when the jaws of the sampler were closed, which drained overlying water and created depressions and crevasses in the sediment surface from water and sand rushing out of the sampler. It is unclear if the remaining sampling matrix is intact given the localized erosional lines. Sediment spillage, measured approximately 1 to 4 cm deep over an area of approximately 2 square feet on the desk below the grab sampler. AECOM plans to discuss the plan going forward for sampling in these sands. AECOM has encountered these sands previously during stratified random sampling, which caused the location to be moved to alternate locations.

Samples Collected, Measurements Made, Photographs: (List Locations, Matrix & Sample type):
On the Tieton, SMA targeted surface sediment samples were collected in the Swan Island Lagoon, approximately, at the following locations:

- PDI-SG-S198 – Within 25 ft radius, slightly sandy soft silt
- PDI-SG-S201 – Within 25 ft radius, dark gray silt with sand
- PDI-SG-S200 – Within 25 ft radius, slightly sandy, clayey silt
- PDI-SG-S194 – Within 25 ft radius, slightly sandy silt
- PDI-SG-S193 – Within 25 ft radius, slightly sandy, clayey silt
- PDI-SG-S186 – Within 25 ft radius, slightly sandy, clayey silt
- PDI-SG-S172 – Within 50 ft radius, gravely, silty sand

Note: Sediment descriptions are simplified and AECOM/Geosyntec provided more detailed sediment descriptions in their sampling notes.

On the Cayuse, the following surface sediment samples were collected at SMA locations near RM 4.6 and 6.7:

- PDI-SG-S063 – Within 25 ft radius, silt with fine sand, trace organics
- PDI-SG-S123 (Thick sample) – Within 50 ft radius, sandy silt with layer of black sand, trace gravel & organics
- PDI-SG-S123 (Thin sample – archived) – Within 50 ft radius, silty sand and black sand, clams, small crustacean (retreated into sediment before fully identified)
- PDI-SG-S125 – Within 25 ft radius, sandy silt with trace organics
- PDI-SG-S128 – Within 25 ft radius, sandy silt with clams, trace gravel
- PDI-SG-S126 – Within 25 ft radius, sandy silt with lots of woody debris, trace grey sheen
- PDI-SG-S126-D – Duplicate to PDI-SG-S126

Note: Sediment descriptions are simplified and AECOM/Geosyntec provided more detailed sediment descriptions in their sampling notes.

Photographs of work were taken throughout the day and provided to EPA via email. Additional photos were taken and archived with a description included in the photolog Excel spreadsheet, which are maintained electronically in the ProjectWise project folder.

Borings Completed (Include total footage drilled for each boring):
None

Wastes Generated and How Handled:

- Excess sediment and debris in the power grab sampler and in the sampling bowls was rinsed back into the river per the FSP. No heavy sheen was observed.
- Disposable gloves, paper towels, and other general trash was containerized in a trash bag and removed daily as needed for disposal to a municipal waste management dumpster.

Health and Safety Issues, Equipment Needs, Staffing:
None

Signature: Wardah Azhar, Julee Trump **DATE** May 3, 2018

Figure 1: SMA targeted sampling field location notes (Tieton)